

Buffalo County Land & Water Resource Management Plan



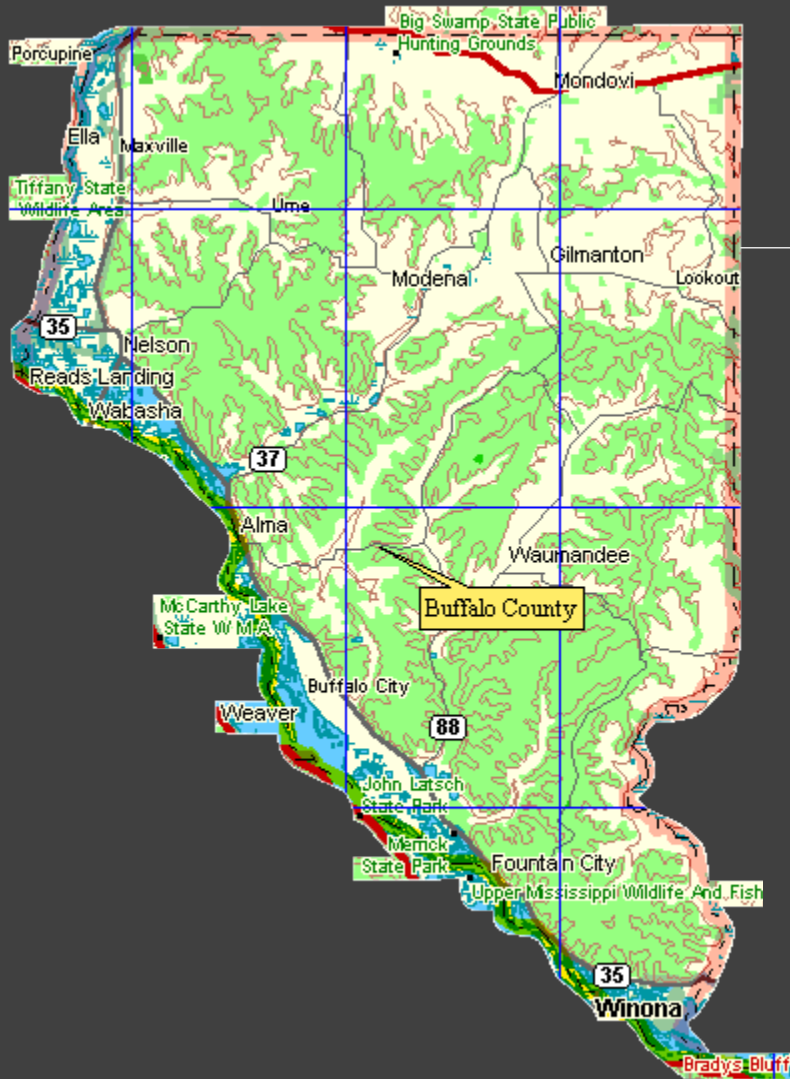
5 Year Extension

Presented by:
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Buffalo County

Mission Statement



“Committed to Serving the Public
by Providing Leadership
for the Conservation of our
Natural Resources”



Buffalo County

17 Civil Townships
Population 13,425

Land Cover:

438,080 acres = Total Land Area
162,746 acres of farmland (37%)
151,073 acres is cropped (34%)
188,374 acres of woodland (43%)

Land in Farms

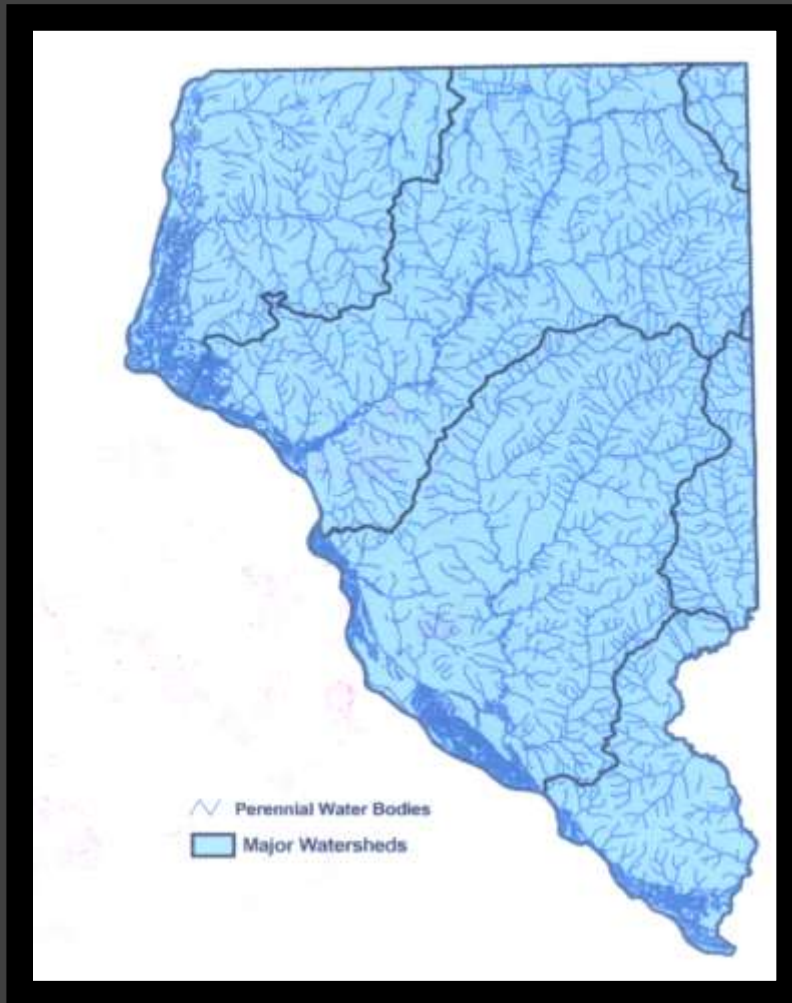
Buffalo County	Number of Farms	Average Size of Farms	Farm Acres
1979	1,310	295	387,000
1998	1,170	291	341,000
2007	1,229	250	307,035
2012	1,061	288	305,302

21% decrease in farmland over 33 years

State of WI	Number of Farms	Average Size of Farm	Farm Acres
1974	105,000	187	19,600,000
1998	78,000	210	16,400,000
2007	78,463	194	15,190,000
2014	69,000	210	14,500,000

26% decrease in farmland; increased from 22% in 2007.

Surface Water Resources

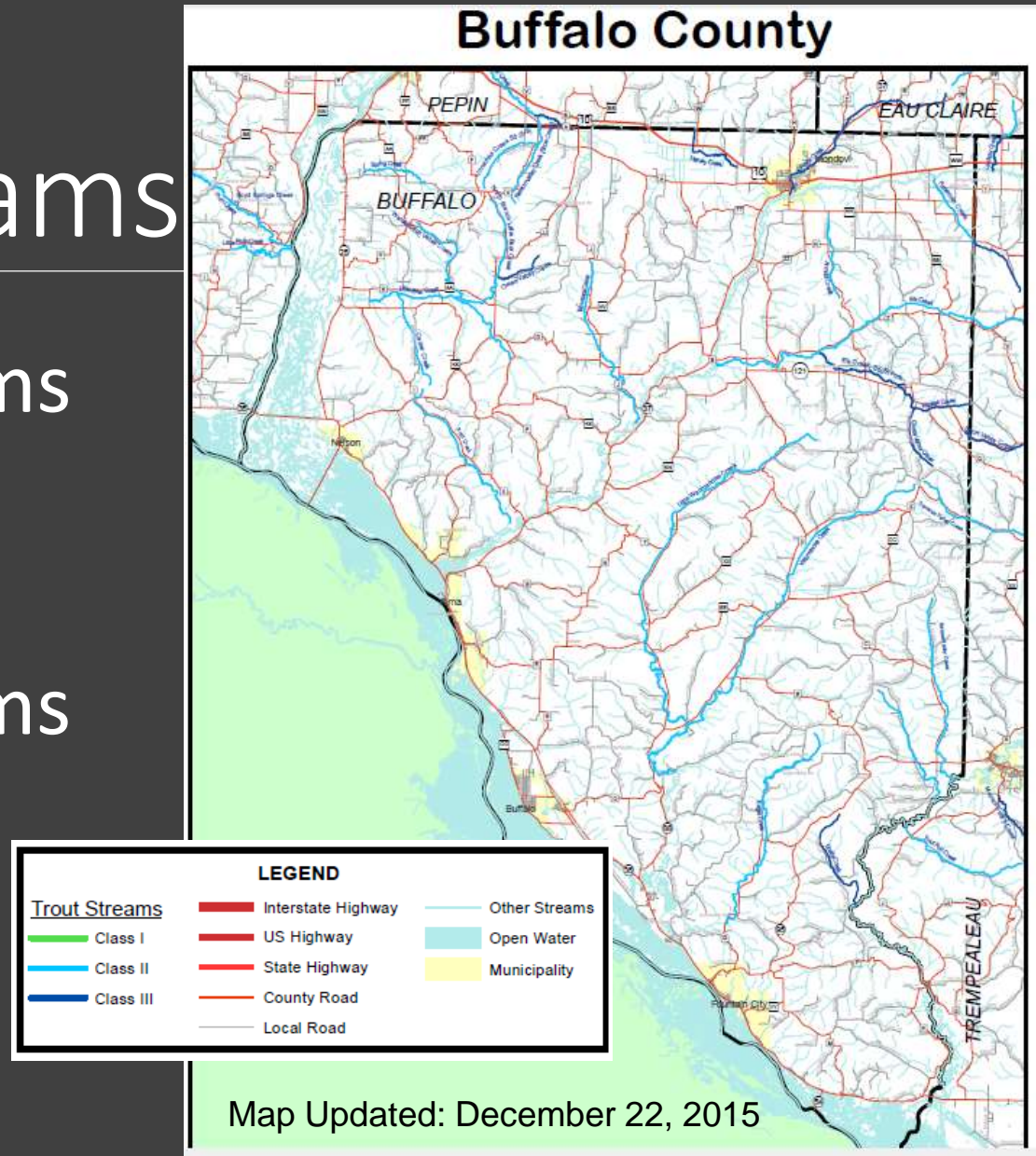


- Mississippi, Chippewa, and Trempealeau Rivers define county borders.
- 1070 miles of intermittent and 640 miles perennial streams
- 22 lakes totaling 358 acres (50% have depths < 5 feet)
- 47,294 acres of wetlands (10% LC)
Riparian wetlands: Buffalo, Miss., Chippewa, and Trempealeau Rivers

Trout Streams

2016: 34 streams
and 175 miles

2011: 21 streams
and 73 miles



Agricultural Ordinances

- Manure Storage Ordinance regulates the construction, alteration, and closure of manure storage facilities.
 - * Currently pursuing changes to ordinance to include NR151 Standards.
- Buffalo County does not regulate under Livestock Siting.
- Farmland Preservation Zoning Districts may be an option in <40% of Towns through Zoning Ordinance re-write.
- Farmland Preservation Agreements are expiring.
2009=135 participants; 2016=55 participants; 2022=23 participants.

Resource Challenges

Cropland erosion

Gully erosion on steep slopes

Nutrient management

Groundwater protection

Streambank erosion and sedimentation

Buffalo County Land and Water Resource Management Plan, 2012 – 2022

OBJECTIVES:

1. Reduce Soil Erosion
2. Raise Awareness for Nutrient and Manure Management
3. Agricultural Performance Standards and Prohibition Strategy

Buffalo County Land and Water Resource Management Plan, 2012 – 2022

1. OBJECTIVE: Reduce Soil Erosion

- Reduce Gully Erosion
- Reduce Sheet & Rill and Ephemeral Erosion
- Reduce Streambank Erosion

Buffalo County Land and Water Resource Management Plan, 2012 – 2022

OBJECTIVE: Reduce Soil Erosion



Gully Erosion

- Grade stabilization structures
- Diversions
- CCC structure repair/
Critical Area Seeding

Buffalo County Land and Water Resource Management Plan, 2012 – 2022

OBJECTIVE: Reduce Soil Erosion



Effective Practice = Average 9 Grade Stabilization Structures/year

CCC Structure Repairs for Watershed and Soil Conservation

Meier, 2015



Committee supports maintenance of 5 structures per year through conservation practice cost-sharing.

135 total in County.

4 structures repaired in 2016 for a total cost share of \$11,680.00.

CCC Structure Repairs for Watershed and Soil Conservation



2016 flood waters safely passed over concrete drop structure, alleviating damage to adjacent properties.



Buffalo County Land and Water Resource Management Plan, 2012 – 2022

OBJECTIVE: Reduce Sheet & Rill and Ephemeral Erosion

- Cost sharing Grassed Waterways in fields
- Crop Management Practices (Cover Crops)
- Soil Health Improvements (No-Till, NMP)

OBJECTIVE: Reduce Sheet & Rill and Ephemeral Erosion

- Farm visits
- Technical design & cost-sharing
- Document farm meets “T”
- Grassed Waterways (ATCP 50.96) to reduce sediment loss from concentrated flow channels in fields



OBJECTIVE: Reduce Sheet & Rill and Ephemeral Erosion

2016 DATCP Producer-Led Watershed Grant

Fall Cover Crop Tour



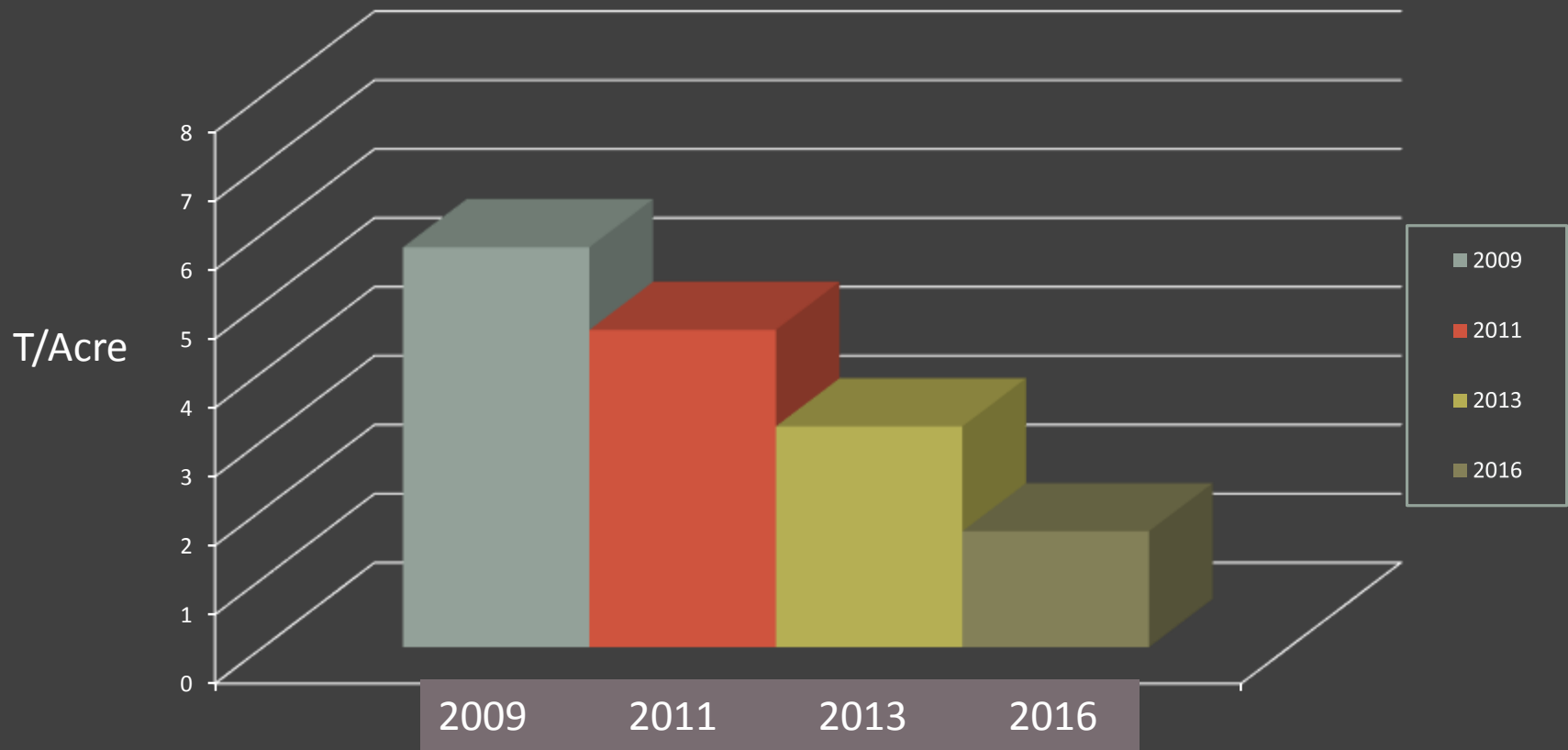
OBJECTIVE: Reduce Sheet & Rill and Ephemeral Erosion

- Soil Health Education: No-till, cover crops, inputs
- NMFE Grant assisted 5 farmers with writing NMP
- One-on-one NM Planning & SnapPlus Training
- Transect Survey data
- Prioritize farm visits



Soil Erosion Transect Survey

Annual Soil Loss



Soil Erosion Transect Survey

Annual Soil Loss per Watershed

Annual Soil Loss in Buffalo County (T/Ac)				
Watershed	2009	2011	2013	2016
Bear Creek	4.1	2.8	4.2	1.4
Lower Buffalo River	5.2	4.8	3.1	1.5
Lower Trempealeau R.	7.3	5.5	3.5	2.2
Middle Trempealeau R.	3.7	5.3	3.1	1.8
Upper Buffalo River	1.7	2.3	2.7	0.9
Waumandee	7.2	4.9	1.2	2.2
Overall Average	5.8	4.6	3.2	1.7

Buffalo County Land and Water Resource Management Plan, 2012 – 2022

OBJECTIVE: Reduce Streambank Erosion



Little Waumandee Creek, August 2016

Streambank Protection Projects



Streambank projects funded by partnership effort: EQIP, RCPP, SWRM, TU, County State Aids, and Rod & Gun Clubs. County can hold easements.



Trout Stream Restoration



Promotional Video:

- Trout Unlimited
- UW-Extension
- WI-DNR
- NRCS
- Buffalo County
- Waumandee Rod & Gun Club
- Fountain City Rod & Gun Club
- Landowners



Buffalo County Land and Water Resource Management Plan, 2012 – 2022

2. OBJECTIVE: Raise Awareness for Nutrient and Manure Management

- Manure Spills
- Soil Sampling
- Manure Storage
- Manure Spreader Calibration
- Manure Spreading
- Barnyard Runoff

OBJECTIVE: Raise Awareness for Nutrient and Manure Management



Homestead Farms, 2016

- Soil sampling
- Manure Spreader Calibration
- Extend education efforts to absentee landowners & field renters

OBJECTIVE: Raise Awareness for Nutrient and Manure Management

Future priorities:

- Update Manure Storage Ordinance to include NR151 Prohibitions
- Education on Spreading/Planning to minimize fish kill events from runoff
- Sediment & phosphorus reduction modeling



Buffalo County Land and Water Resource Management Plan, 2012 – 2022

3. OBJECTIVE: Agricultural Performance Standards and Prohibition Strategy (NR 151 Strategy)



OBJECTIVE: Agricultural Performance Standards and Prohibition Strategy



- Increase Farmer Awareness of Performance Standards & Prohibitions
- Help Farmers Identify Where Compliance Has Been Achieved
- Work With Priority Farms That Do Not Meet Compliance

OBJECTIVE: Agricultural Performance Standards and Prohibition Strategy

Priority Farms

- Manure Storage Permit Ordinance applicants
 - Farms without a nutrient management plan
 - Cropland and livestock facilities located in SWQMA's
 - Farmland Preservation participants
 - Complaints
- Developing Tracking
NR 151 Compliance system



OBJECTIVE: Agricultural Performance Standards and Prohibition Strategy

Farm Visits when receiving cost sharing

Nutrient Management Planning assistance &
NM Plan Review

*TRM and NOD Grant
funding to address issues



Winnes 2016 NOD Grant Manure Storage & Barnyard Runoff



2016 NOD Grant = \$138,600 to eliminate runoff to Lewis Valley Creek

Kabus Barnyard Runoff 2015 TRM Grant



Performance Standards:

- NR 151.06 Roof Runoff Control/Clean Water Diversion
- NR 151.08 Waste Transfer eliminated Barnyard Runoff

\$21,750 TRM Grant to eliminate direct barnyard runoff to Joos Valley Creek

Information & Education



Information & Education

School Presentations

Conservation Tour (5th Grade)

News Releases

Webpage Updates

Spring Trout Day event

Conservation Camp (6th Grade)

County Fair Booth

Farm Bureau meetings

Youth Conservation Speaking and Poster Contest

County Conservation Club

Natural Resource Internship

Rod & Gun Club/Trout Unlimited meetings and workday events

Land Judging Contest (High School)

Annual Bluff Prairie Education Tour

Annual Bluff Prairie winter meeting

Bluff Prairie Restoration

Pikes Peak and
Three Sisters,
Nelson, WI



Non-Metallic Mining Reclamation

Department Re-
structuring in 2014

NMM Reclamation
Policies &
Procedures
developed in 2015



2017-2022 Priorities

- Farm Visits
- Soil Health- Cover Crop, Bio-Strip Till
- Nutrient Management
- Water Quality Trading and Phosphorus Modeling
- Technical design and cost-share Conservation Practices
- Flood Damage Repair Conservation Practices & Streambanks
- PL-566 Dam maintenance and major repairs
- CREP contracts expiring (52 contracts in 2017)



Flood Damage Repair



A scenic landscape photograph showing a river flowing through a dense forest. In the foreground, a tree branch with yellowing leaves hangs from the top right. The river winds through the middle ground, surrounded by lush green trees. The sky is a clear blue. The word "Questions?" is written in a large, yellow, outlined font across the center of the image.

Questions?